UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

January 6, 2009

AR-18J

Mary Ann Dolehanty, Acting Permit Section Supervisor
Michigan Department of Environmental Quality
Air Quality Division
P.O. Box 30260
Lansing, Michigan 48909-7760

Dear Ms. Dolehanty:

Thank you for the opportunity to comment on the proposed Prevention of Significant Deterioration (PSD) construction permit No. 317-07 for Wolverine Power Supply Cooperative, Incorporated (Wolverine). EPA has the following comments:

1. For unit EUAXBOILER, the proposed Best Available Control Technology (BACT) emission limits for particulate matter (PM), particulate matter less than 10 microns (PM10), nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOC) and hydrogen chloride (HCl) explicitly exclude the periods of startup and shutdown, while the permit does not contain other emissions limits for these pollutants that cover the startup and shutdown periods. The Environmental Appeals Board has found that "BACT requirements cannot be waived or otherwise ignored during periods of startup and shutdown." (See Tallmadge Generating Station, MI, PSD Appeal No. 12-12, at 24 (E.A.B. 2003)). If MDEQ determines that the source cannot comply with the primary BACT limits during periods of startup and shutdown, MDEQ must establish and justify alternative limits for these periods.

In addition, neither the permit nor the statement of basis contains any discussion about eliminating or reducing excess startup/shutdown emissions; and the permit does not define startup and shutdown, or contain recordkeeping or reporting requirements for startup and shutdown. Please add the work practice requirements for startup and shutdown, including permit restrictions for the duration of individual startup events, or permit restrictions on the number of startup/shutdown events in an annual period.

2. For unit EUAXBOILER, the proposed emission limits table does not contain limits for sulfur dioxide (SO2). According to Table 3-2 of the permit application, the SO2 emission rate is 0.00552 pounds per million British thermal unit (lb/MMBtu). Please add the limit and appropriate monitoring, recordkeeping and reporting to the permit.

3. For unit EUAXBOILER, the proposed permit includes applicable emission limits, in lb/MMBtu, for PM/PM10, NOx, CO, VOC, and HCl. It is unclear how the source will demonstrate continuous compliance as the monitoring associated with these requirements is stack testing every 5 years after the initial startup. Please explain how the source will demonstrate compliance, or incorporate into the permit additional monitoring and reporting requirements.

4. For unit EUEMGGEN, the proposed emission limits table does not include limits for SO2 and VOC. According to Table 3-2 of the permit application, the maximum emission rate for SO2 is 0.14 g/HP-hr and for VOC is 1.14 g/HP-hr. Please add these rates and appropriate monitoring, recordkeeping and reporting to the permit.

5. For unit EUFIREPUMP, the proposed emission limits table does not include limits for CO, SO2 and VOC. According to Table 3-2 of the permit application, the CO emission rate is 3.73 g/HP-hr, SO2 emission rate is 0.14 g/HP-hr and the VOC emission rate is 1.14 g/HP-hr. Please add these rates and appropriate monitoring, recordkeeping and reporting to the permit.

6. For unit EUBLACKSTART, the proposed emission limits table does not include VOC limits. According to Table 3-2 of the permit application, the VOC emission rate is 0.011 lb/MMBtu, and this rate was used in several calculations. Please add this rate and appropriate monitoring, recordkeeping and reporting to the permit.

7. For units FGCOOLINGTWR, the proposed permit does not include PM emission limits. According to Table 3-2 of the permit application, the maximum PM emissions are 3.25 lb/hr. Please add this rate and appropriate monitoring, recordkeeping and reporting to the permit.

8. For units FGCFB, the emission limits table contains limits for PM10, NOx, CO, SO2, and VOC which exclude periods of startup and shutdown. However, these pollutants also have limits that apply when "the boiler operates." It is not clear if this refers to normal operation only or if it includes startup/shutdown as well. Please explain. As discussed above, the BACT requirements cannot be waived during periods of startup and shutdown, but you may establish alternative limits for periods of startup and shutdown if you can justify them as BACT for these periods.

9. For units FGCFB, the emission limits table includes limits for NOx, CO, SO2, and VOC based on the load (i.e. more than 70% and 50-70% of maximum heat input). However, the permit application does not include a BACT analysis for the limits established for a load between 50% and 70% of maximum heat input and more than 70%. Please provide an adequate BACT analysis to support the limits established in the permit. As proposed, those limits are much higher than most BACT limits in similar permits (see the list with recent BACT comparisons in Appendix 11 of permit application). Without an analysis we do not know if the proposed limits are justified. Finally, the frequency of loads between 50% and 70% or over 70% of maximum heat input is missing. If the permit includes different emission limits for different emission loads, you must provide

an analysis of how the frequency of different loads impacts the overall emissions of all pollutants, and ensure that emissions are minimized, as required by the Clean Air Act.

10. For units FGCFB, the emission limits table contains limits for NOx, CO, SO2, and VOC that are different from the limits for these pollutants in the Table 3-1 of the permit application (for example, the NOx proposed limit is 281.1 lb/hr, whereas in the application it is 212.10 lb/hr). It is not clear why these limits differ. Please explain.

11. According to the permit application, the SO2 BACT limit for units FGCFB is set for the worst-case situation (which is not defined) and the BACT analysis assumes 98% control efficiency. However, if the company uses different fuels, such as: Powder River Basin (PRB) coal (a low sulfur sub bituminous coal), petroleum coke, or biomass, the control efficiencies may be lower than 98%. EPA has stated in comments on similar permits that the permitting authority should not assume the worst-case in the BACT analysis (see, for example, the November 9, 2006 letter from EPA to Clark Duffy, Kansas Department of Health & Environment, Re: Holcomb Units 2-4).

For example, when the source fires 20% biomass (with very low sulfur content), the SO2 emission limit should reflect the lower amount of sulfur in the combined fuels. As proposed, the permit allows the facility to use a blend of fuels and to operate its SO2 controls at the "worst-case" control efficiencies, possibly resulting in emissions that are higher than they would be with proper operation of the SO2 controls. BACT is defined as an emission limitation based on the maximum degree of reduction for each pollutant subject to regulations under the CAA. In order to achieve the maximum degree of reduction in SO2 across the range of fuels that may be burned, EPA recommends the permit include separate SO2 limits for each type of fuel used, since SO2 emissions are a function of the fuel. Either a percent reduction or separate SO2 limits for each fuel would show the maximum degree of SO2 reduction.

12. 40 C.F.R. Part 60, Subpart Da requires a 95% SO2 emissions reduction based on a 30-day rolling average. This requirement is missing from the proposed permit for units FGCFB. Please add this requirement to the permit.

13. For units FGCFB, the proposed permit does not contain startup/shutdown recordkeeping and reporting requirements, therefore making it impossible to determine the source's compliance with the restriction in condition III.1 (limiting the number of startup/ shutdowns per year). Please add these requirements to the permit.

14. For units FGCFB, the BACT limit of 0.003 lb/MMBtu for VOC limit is higher than BACT limits for VOC at other similar sources. Both the Santee Cooper (South Carolina) and Louisville Gas & Electric Trimble County (Kentucky) power plants have a 0.0024 lb/MMBtu BACT limit for VOC. Please provide the justification as to why a lower BACT limit cannot be achieved by this source, including an analysis of the energy, environmental, and economic impacts of available control technologies, or revise the emissions limit.

15. For units FGCFB, the BACT limit of 0.15 lb/MMBtu (30-day rolling average) for CO is higher than BACT limits for CO at other similar sources. For examples, there are at least 3 sources with a BACT CO limit of 0.1 lb/MMBtu: Archer Daniels Midland (IL), Cogeneration Plant (PR), and Indeck-Elwood Energy Center (IL). Please provide the justification as to why a lower BACT limit cannot be achieved by this source, after analyzing the energy, environmental, and economic impacts of available control technologies or revise the emissions limit.

16. For units FGCFB, several proposed emission limits require compliance on a 30-day rolling average basis. However, several similar permits (including permits listed in the RACT/BACT/LAER Clearinghouse used for comparison in the permit application) contain a 3-hour average or 24-hour rolling average. Please explain why a shorter compliance time is not feasible for this source.

17. For unit EULIMESTONE, the proposed permit does not include an operational limit on the maximum annual throughput of limestone. This limit is needed to substantiate several calculations such as the efficiency of the fabric filter and the wind erosion emissions calculation, which are based on the amount of limestone supply and usage/day. Please include this limit in the permit.

We look forward to continuing to work with you in resolving these issues. If you have any further questions, please contact Laura Cossa, of my staff, at 312-886-0661 or cossa.laura@epa.gov.

Sincerely yours,

Pamela Blakley

Pamela Blakley, Chief
Air Permits Section